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Richard G. Kidd, IV, Deputy Asst. for Energy & Sustainability
John Lushetsky, Executive Director, Army Energy Initiatives Task Force

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Washington, DC 20301-1400

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Army Energy Initiatives Task Force

Industry Summit

We've got the LAND and the DEMAND

Agenda

0900 – 1000	Registration and Networking
1000 – 1030	Ms. Nancy Sutley, Chair, White House Council on Environmental Quality
1030 – 1100	Honorable Katherine Hammack, Assistant Secretary of the Army IE&E
1100 – 1215	Energy Initiatives Task Force Presentation
1215 – 1300	Questions and Answers

Ms. Nancy Sutley

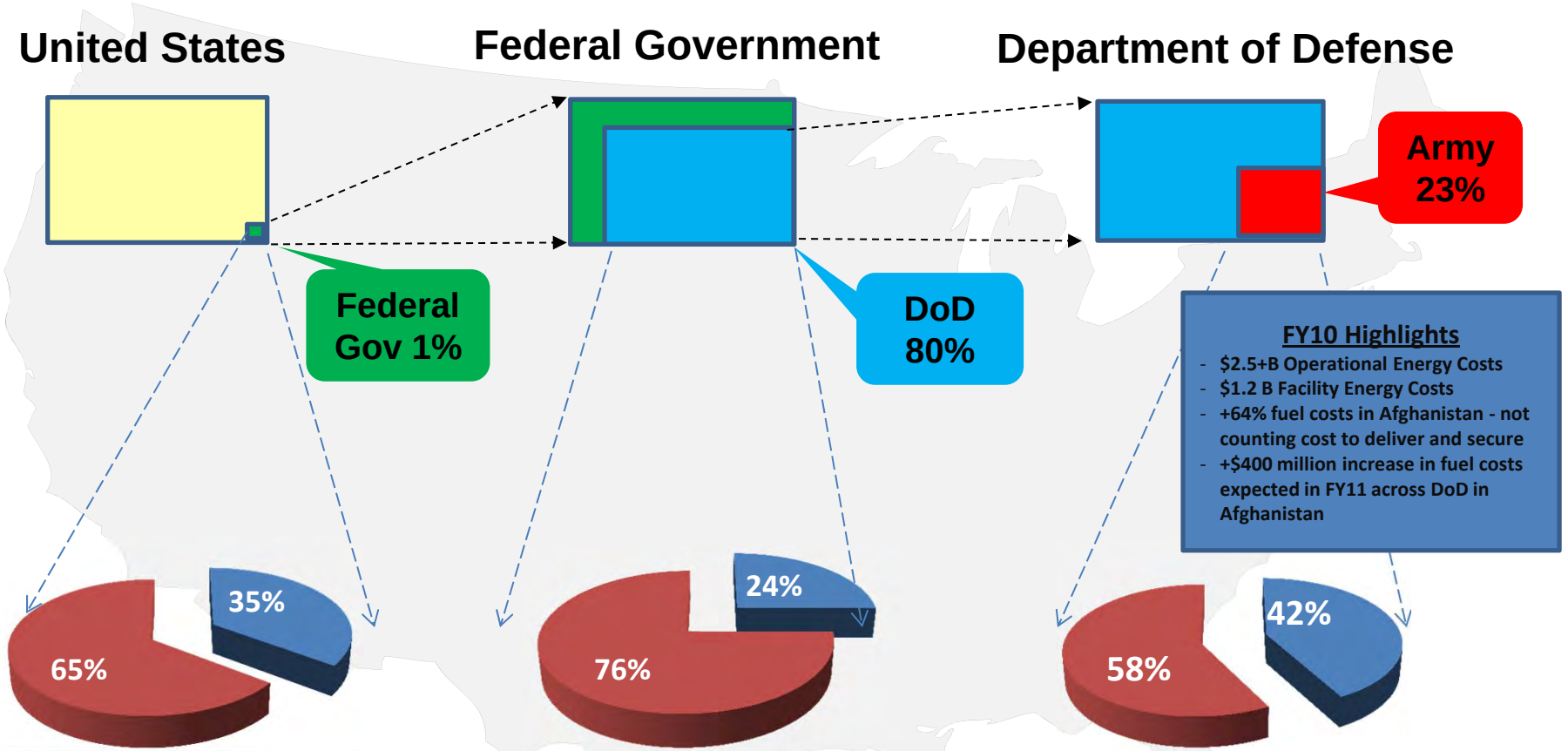
Chair, White House

Council on Environmental Quality

Honorable Katherine Hammack
Assistant Secretary of the Army for Installations, Energy & Environment

Perfect Storm

Army Energy in Perspective – 2010



Sources: Energy Information Agency, 2010 Monthly *Energy Review;* Agency Annual Energy Management Data Reports submitted to DOE's Federal Energy Management Program (Preliminary FY2010)

Army Power and Energy Video

Click on Picture for Video

Army Energy Program

- **Change the Culture: Every Soldier a Power Manager**
  - Senior Energy & Sustainability Council (SESC) / Senior Energy Executive (SEE)
  - Energy & Sustainability must be a consideration in all Army activities
  - System-wide approach for designing base camps to capture efficiencies

- **Drive Efficiency across the Enterprise**
  - Technology/policies will reduce energy footprint
  - Leverage public/private financing to accelerate efficiency projects
  - Implement technologies to significantly reduce energy footprint in the field

- **Build Resilience through Renewable / Alternative Energy**
  - Diversify sources of energy to allow for continued operations during energy disruptions
  - Attract private investment to develop large-scale renewable energy projects
  - Provide flexibility & resiliency by developing alternatives & adaptable capabilities

- **Science & Technology**
  - Army's future efforts depend on Science & Technology investments

Army Power & Energy

Basing
- Installation
- Contingency

Soldier

Vehicles
- Tactical
- Non Tactical
- Air
- Land

OPERATIONAL ENERGY

NET ZERO STRATEGY

"Grand Challenges"

- Give soldiers and leaders capability to manage energy status, resources, performance
- Significantly reduce energy footprint
- Provide flexibility and resiliency by developing alternatives and adaptable capabilities

Power and Energy Strategy White Paper, Army Capabilities Integration Center/Research, Development and Engineering Command /Deputy Chief of Staff, G-4, US Army, 1 April 2010

Soldier Power

Expeditionary Soldier Power:

- Definition: the energy and associated systems, information and processes **required for a dismounted Soldier**
- Key enabler for operations**,** essential for patrols and required for Soldier sustainment
- Alternative energy capabilities & interoperability **builds flexibility and resilience**

Soldiers of the 1-16th Infantry Battalion:

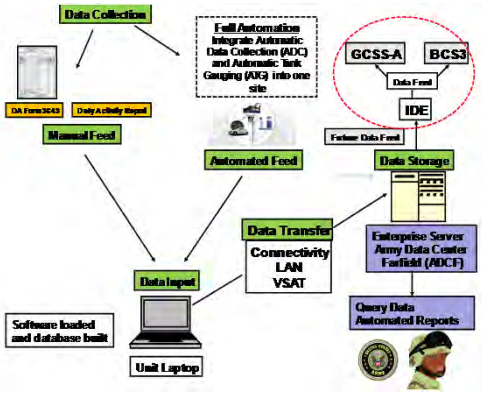
- Deployed to central Afghanistan with a suite of advanced Soldier Power capabilities to reduce the volume and weight of their load:
  - **Soldier Power Manager (SPM)** – state of the art, lightweight, portable power management system
  - **Rucksack Enhanced Portable Power System** – state of the art lightweight, portable solar power system
  - **300 Watt Fuel Cell** – operates on packaged propane canisters; two 8-oz fuel cans will last up to 4 hours
  - **1KW JP8 Generator** – allows Soldiers to leverage the existing logistics infrastructure while providing a light-weight, man-portable power solution

Vehicle Power

Vehicle Power Initiatives

- TARDEC – DOE Partnership
- Tactical Fuels Manager Defense
- Improved Turbine Engine Program
- Vehicle-to Grid (SPIDERS)
- Smart-Charging Micro Grids
- Low Speed Electric Vehicles
- Hybrid Electric Vehicles
- Alternative Fuel Vehicles

Improved Turbine Engines



System Name = TFMD (Tactical Fuels Manager Defense)

Army Non-Tactical Vehicle Fleet

- 80,670 non-tactical vehicles (NTVs)
- 40% of fleet (31,913 NTVs) alternative fuel/hybrid electric vehicles
- 927 low speed electric vehicles

Low Speed Electric Vehicles

Vehicle connected microgrid to provide assured power

Fort Dix Soldiers & Civilians turn in a fossil fuel vehicle for a hybrid vehicle from GSA representatives

Operational Energy

- Reduces reliance on vulnerable Resupply Operations -- enables greater operational freedom of action
- Reduce Soldier's load
- Supports theater requirements
- Conserves Resources

Basing – Net Zero Installations

- **A Net Zero ENERGY Installation** produces as much energy on site as it uses, over the course of a year
- **A Net Zero WATER Installation** limits the consumption of freshwater resources and returns water back to the same watershed so not to deplete the groundwater and surface water resources of that region in quantity or quality
- **A Net Zero WASTE Installation** reduces, reuses and recovers waste streams, converting them to resource values with zero solid waste to landfill
- **A Net ZERO INSTALLATION** applies an integrated approach to management of energy, water, and waste to capture and commercialize the resource value and/or enhance the ecological productivity of land, water, and air

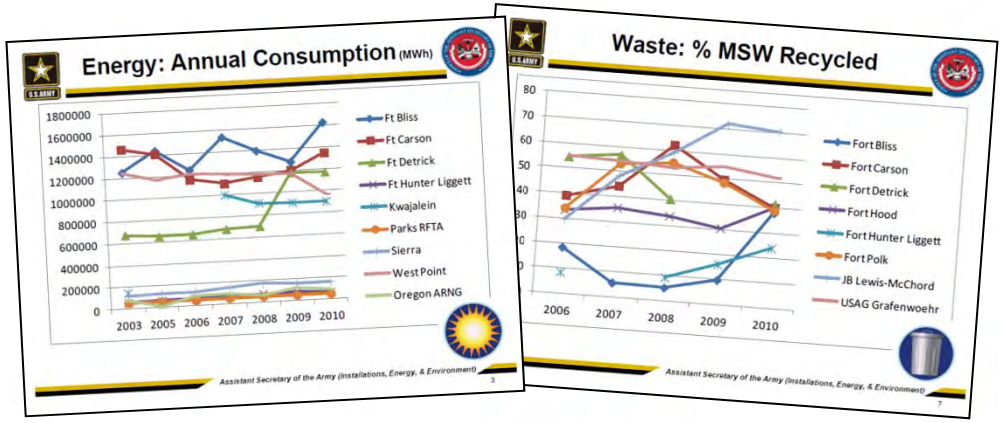
Tracking Net Zero Progress

Net Zero 'Scorecard'

Patterned after the federal OMB Sustainability & Energy Scorecard

Net Zero Scorecard: Fort XXXX

DoD Goal	Area	Net Zero Goal	FY2010 Status
Energy Intensity Reduction: Target: 37.5% by FY2020 Baseline: FY2003	Energy	Energy Intensity Reduction: Target: 65% by FY2020 Baseline: FY2003	
Renewable Energy Use: Target: 20% by FY2020 Baseline: NA	Energy	Renewable Energy Use: Target: 100% by FY2020 Baseline: NA	
Biogas Recovery: Target: LF or WWTP recovery unit in place by FY2020 Baseline: NA	Energy & Waste	Biogas Recovery: Target: LF or WWTP recovery unit in place by FY2020 Baseline: NA	Not currently tracked
Green Buildings: Target: 15% of EB inventory meets HPSB MOU by FY2015 Baseline: NA	Energy & Water	Green Buildings: Target: 15% of EB inventory meets HPSB MOU by FY2015 Baseline: NA	Not currently tracked
Green Buildings: Target: 100% of new bldgs meet LEED-Silver / equivalent [OSD policy: 25 Oct 2010]	Energy & Water	Green Buildings: Target: 100% of new bldgs meet LEED-Silver / ASHRAE 189.1	
Potable Water Use: Target: 26% by FY2020 Baseline: FY2007	Water	Potable water use: Target: 26% by FY2015 50% by FY2020 Baseline: NA	
Industrial & Irrigation Water Use: Target: 20% by FY2020 Baseline: FY2010	Water	Industrial, Landscaping & Irrigation Water Use: Target: 20% by FY2015 40% by FY2020 Baseline: NA	Not yet being reported
Pre-Development Hydrology: Target: Retain at all bldgs >5,000 SF by FY2011 Baseline: NA	Water	Pre-development hydrology: Target: 100% by FY2012 Baseline: NA [EISA 2007 requirement]	
MSW Diversion: Target: 50% by FY2015 Baseline: NA	Waste	MSW Diversion: Target: 50% by FY2015 100% by FY2020 Baseline: NA	Achieved 64% diversion of MSW in FY2010
C&D Diversion: Target: 60% by FY2015 Baseline: NA	Waste	C&D Diversion: Target: 60% by FY2015 100% by FY2020 Baseline: NA	Achieved 75% diversion of C&D debris in FY2010
Electronics Diversion: Target: 100% disposed of sustainably Baseline: NA	Waste	Electronics Diversion: Target: 100% diverted from MSW disposal Baseline: NA	Currently not tracking % electronics diversion
Waste Management Plan: Target: 100% updated on a 5-yr cycle Baseline: NA	Waste	Waste Management Plan: Target: 100% updated on a 5-yr cycle Baseline: NA	Current Integrated Solid Waste Management Plan (ISWMP) is dated FY2008



Net Zero Trends

Pilot Installations' trends by fiscal year, using their Scorecard data

Success Stories

For more info on Installation successes:

- https://eko.usace.army.mil/public/fa/netzero/
- http://army-energy.hqda.pentagon.mil/netzero/

Basing – Net Zero Installations

Innovation

The world will not evolve past its current state of crisis by using the same thinking that created the situation.

- ALBERT EINSTEIN

GovEnergy – August 10, 2011

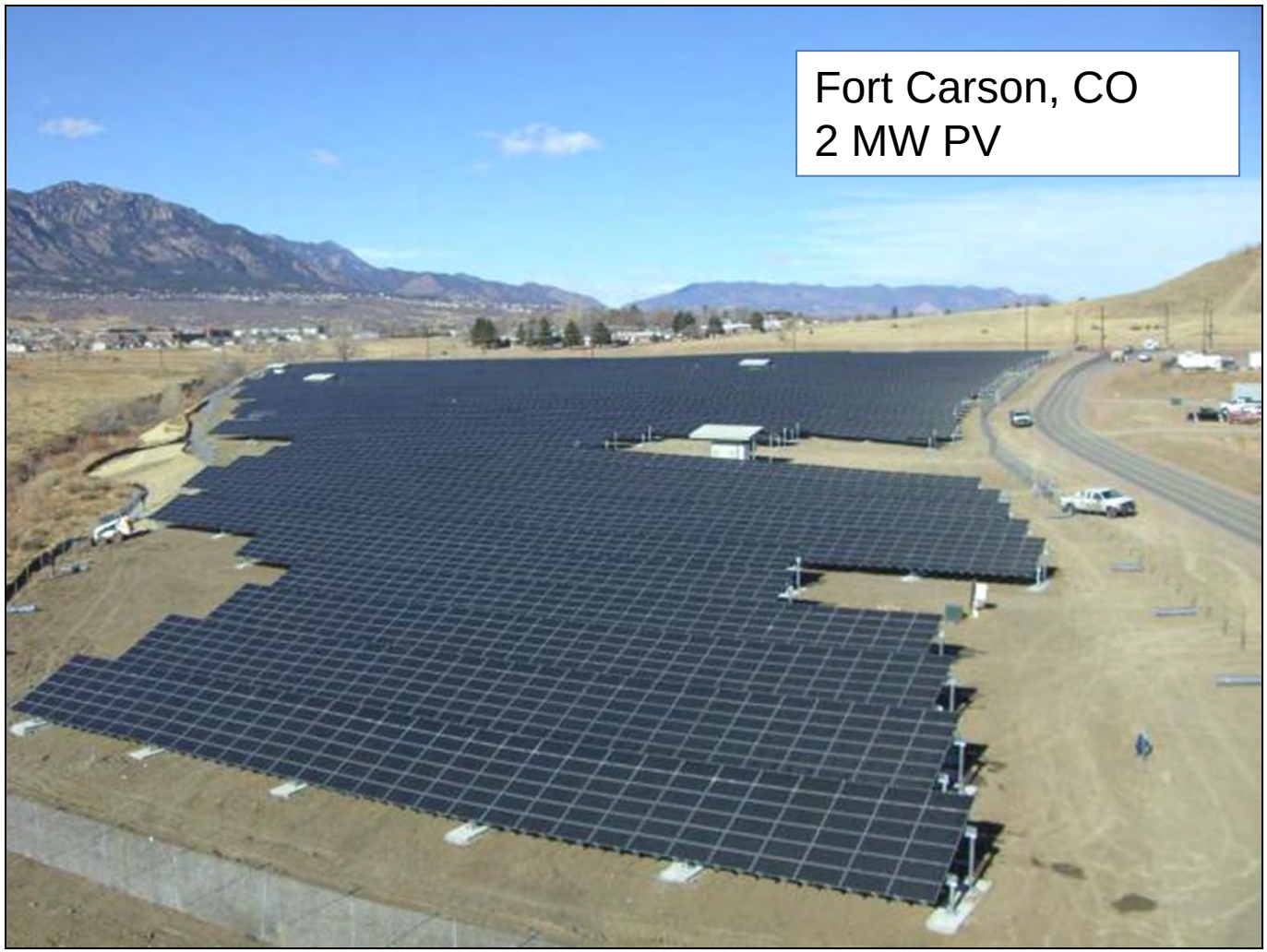
Click on Picture for Video

Secretary of the Army John McHugh
Announcing the EITF
GovEnergy Conference
Cincinnati, Ohio
August 10, 2011

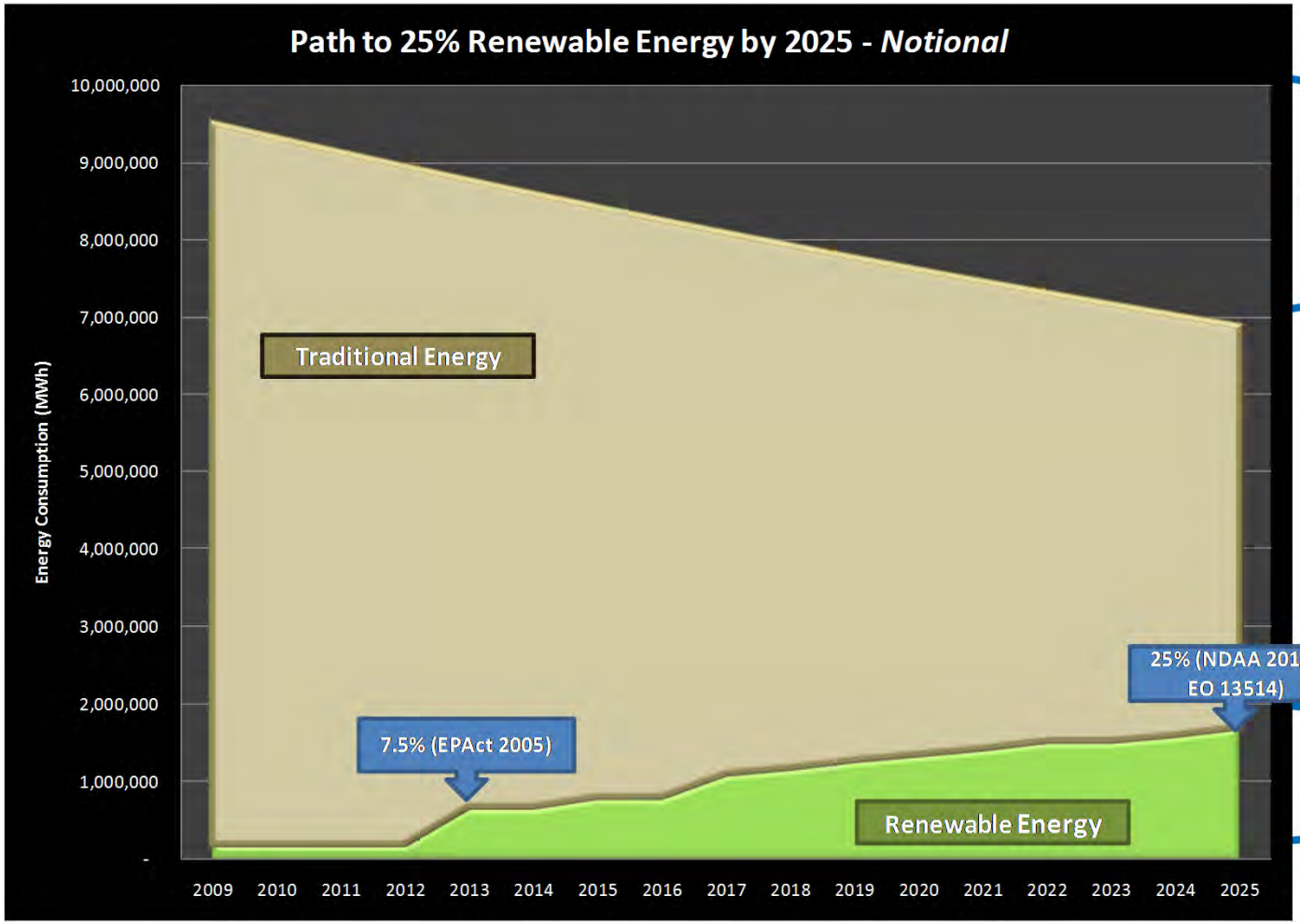
Concluding Remarks

Mr. Richard G. Kidd, IV
Deputy Assistant Secretary
for Energy & Sustainability

Army Renewable Energy NOT New



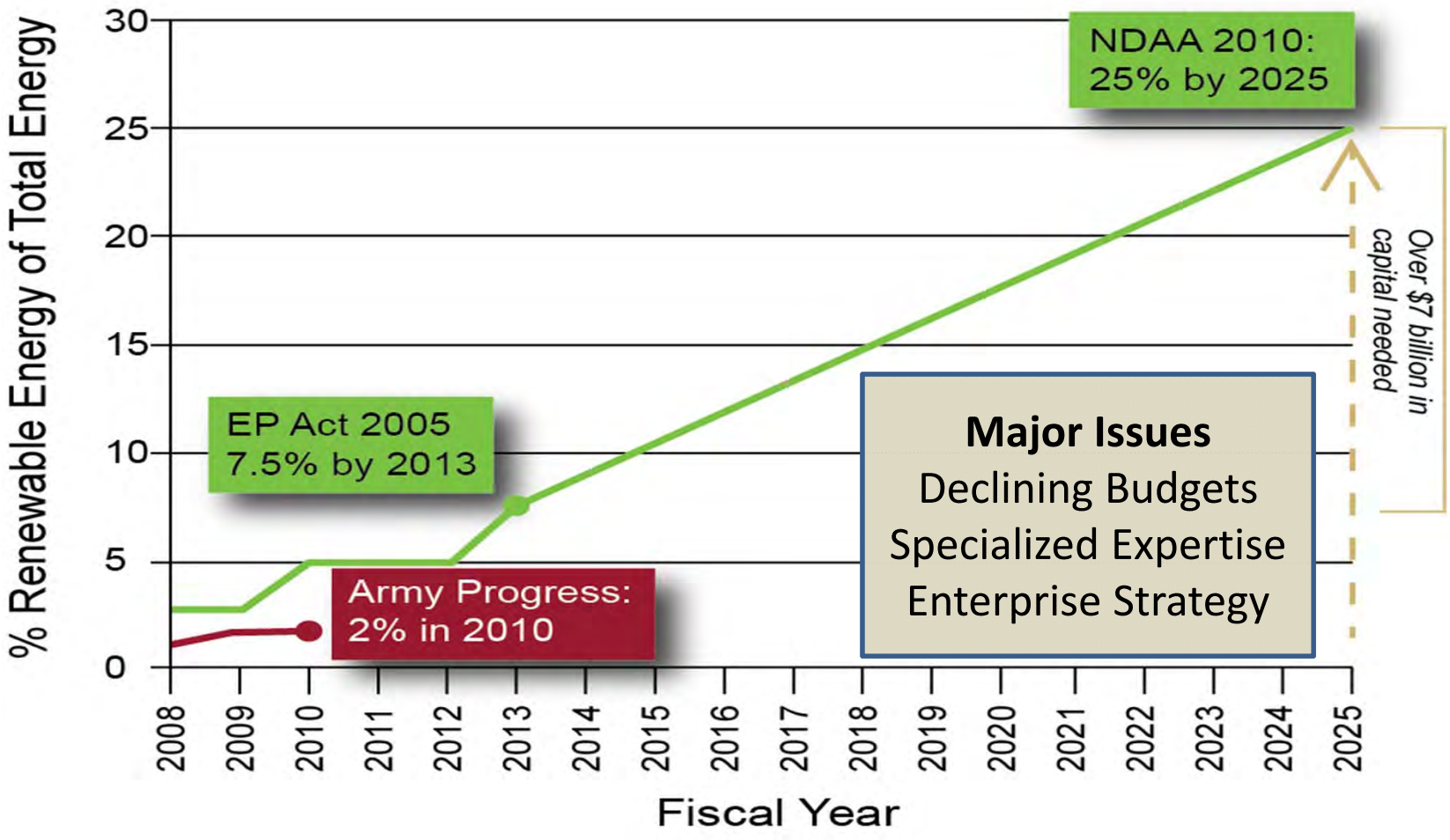
Army Approach to Achieve Renewable Energy Goals



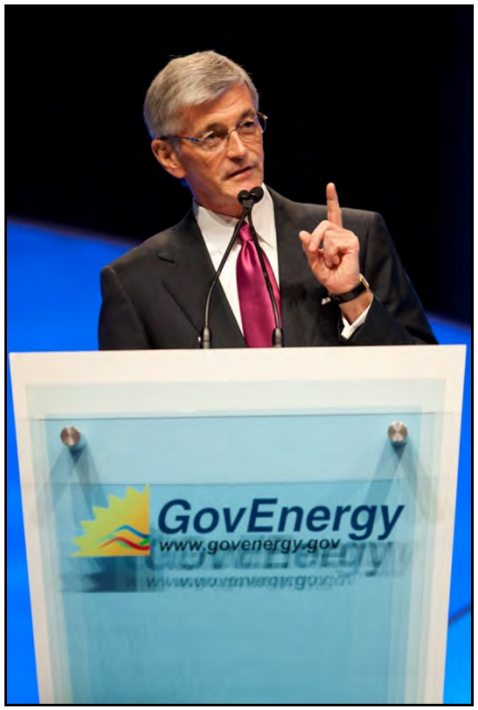
Energy Efficiency Gains funded by appropriated funding, ESPC, UESC

Requires leverage of private sector funding, EUL, PPA

Where the Army Needs to Go



Energy Initiatives Task Force



Energy Initiatives Task Force (EITF) announced by the Secretary of the Army on August 10, 2011 at GovEnergy.

EITF will serve as the central management office to implement cost-effective large-scale renewable energy projects on Army installations leveraging industry financing.

Features:

- Large-scale renewable energy projects
  - Greater than 10MW projects
  - Coordinate with installations for 1-10MW projects
  - Third-party financing authorities: PPAs, EULs, UESCs and ESPCs

Benefits of Centralized Approach

- Project Prioritization
  - Focusing on the most promising energy sources and the most favorable markets, supported by required expertise
- Improved Consistency and Communication
  - Providing a well-defined process through a central point of communication with industry
- Economic Optimization
  - Leveraging economies of scale across multiple projects
- Goal Compliance
  - Managing projects across all installations, leading to a more direct path to meeting energy mandates and goals

Outcome: Reliable program for Army and industry

Energy Initiatives Task Force

Mission

Strengthen Army energy security and sustainability by developing a comprehensive capability, and planning and executing a cost-effective portfolio of large-scale renewable energy projects by leveraging private sector financing.

Vision

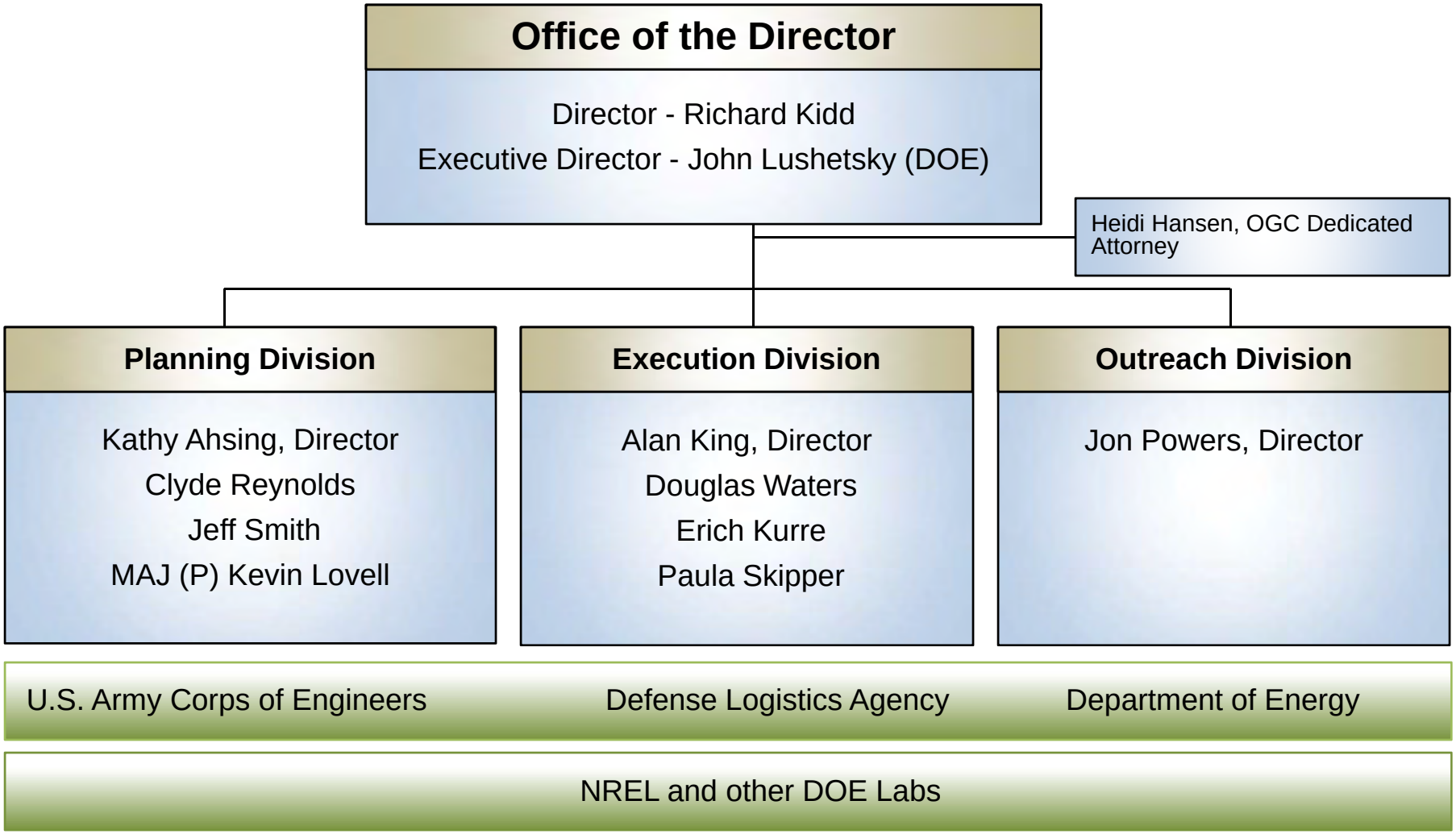
Securing Army installations with energy that is clean, reliable and affordable.

Mr. John Lushetsky
Executive Director
Army Energy Initiatives Task Force

Discussion Topics

- EITF Organization
- Roads to Project Completion:
  - Acquisition approach
  - Development strategy
- Initial Opportunities
- How to Work with the EITF

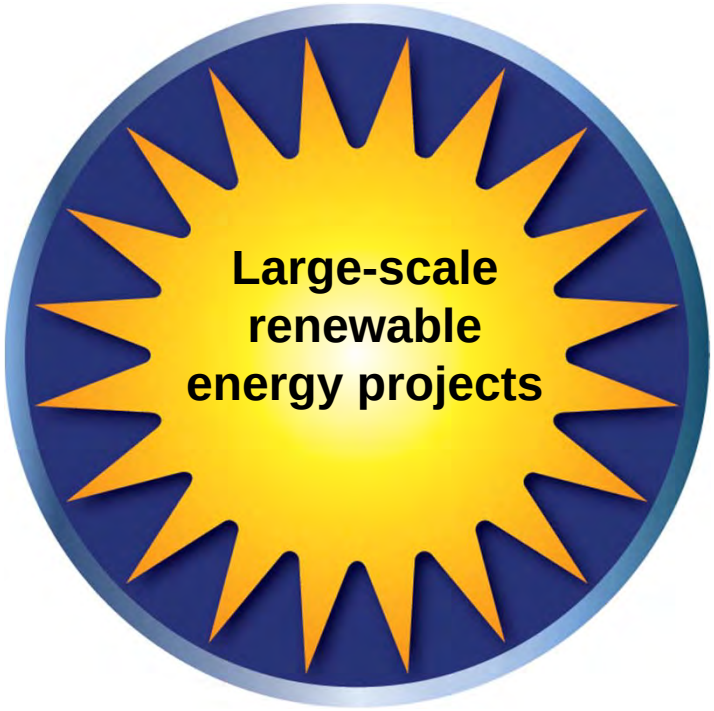
EITF Organization



Roads to Project Completion

Acquisition Strategies: Various approaches to acquiring energy

Development strategy: Planning and execution of project opportunities



Army's Enabling Authorities

The EITF will leverage existing authorities to meet sustainability and renewable energy goals:

- Utility Energy Services Contracts (10 USC 2913)
- Enhanced-use Leasing (10 USC 2667)
- Easement authority (40 USC 1314)
- Utility purchase authority (FAR Part 41)
- Power Purchase Agreements (10 USC 2922a)
- Energy Savings Performance Contracts (10 USC 2865)
- Cooperative Agreements (31 USC 6305)
- Sale of electrical power from alternative energy and co-generation facilities (10 USC 2916)

Acquisition Approach

- The EITF will develop a multi-pronged acquisition approach that will provide required flexibility.
- We expect to utilize multiple contracting offices, potentially including the Army Corps of Engineers and Defense Logistics Agency, as well as DOE power marketing administrations (e.g., WAPA, BPA, TVA).

Acquisition Approach (cont'd)

- The EITF anticipates leveraging a Multi-Award Task Order Contract (MATOC) for PPAs
  - RFP plan for release in CY1Q2012 with anticipated award in CY1Q2013 by the USACE (HNC).
  - Up to 30-year PPA term
  - Small Business participation consideration
  - Structured to create greatest competition
- Additional single project procurement actions will be considered.

USACE (HNC) Points of Contact

Sharon Butler, Chief, Pre-award Branch Division B
Sharon.H.Butler@usace.army.mil

Tonju Butler, Procuring Contracting Officer
Tonju.L.Butler@usace.army.mil

Sarah Tierney, Procuring Contract Specialist
Sarah.M.Tierney@usace.army.mil

Energy Security vs. Affordability

- The goal of the EITF is to increase Army installation energy resilience in a cost-effective way.

- DOD Instruction 4170.11 (11 DEC 09) states that renewable energy may be purchased for a “fair and reasonable” premium.

Environmental Assessments

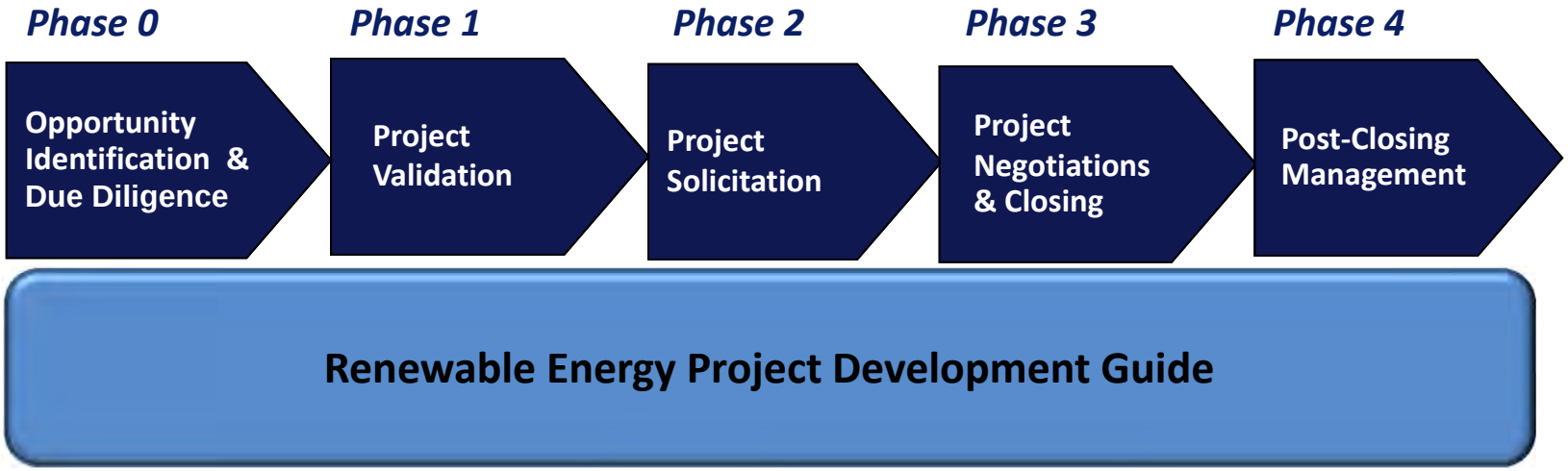
- The EITF will utilize the Army Environmental Command (AEC) to perform National Environmental Policy Act (NEPA) assessments for projects.
- The EITF will fund NEPA actions as required to address cost and schedule risk.

REC Policy

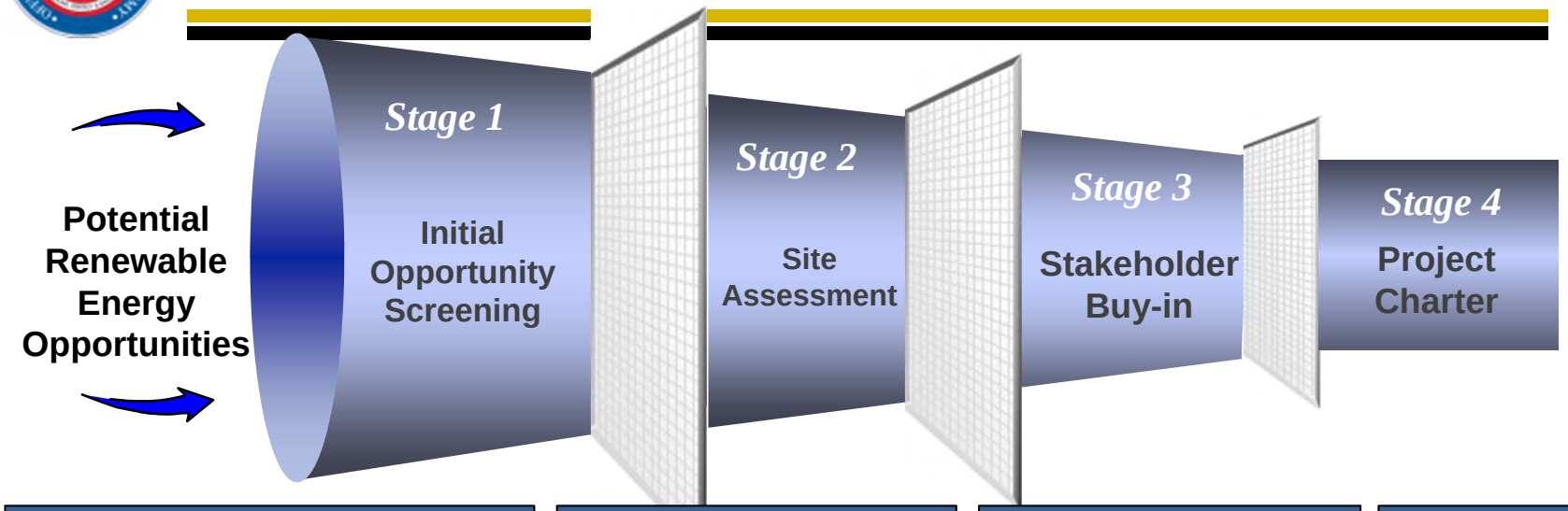
- It will be the Army's goal to retain a number of RECs and cost effectively implement large scale renewable projects.
  - REC swapping will be permitted by the developer
- The EITF will be responsible for establishing an optimum REC strategy for coordinating the tracking of RECs during the life of the project.
- Formal REC policy is in final approval and is expected to be issued in the near future.

Project Development Process

The EITF is producing a process for developing large-scale renewable energy projects that is clear, consistent and transparent. This process will be described in a *Project Development Guide* that will detail the five phases of project development.



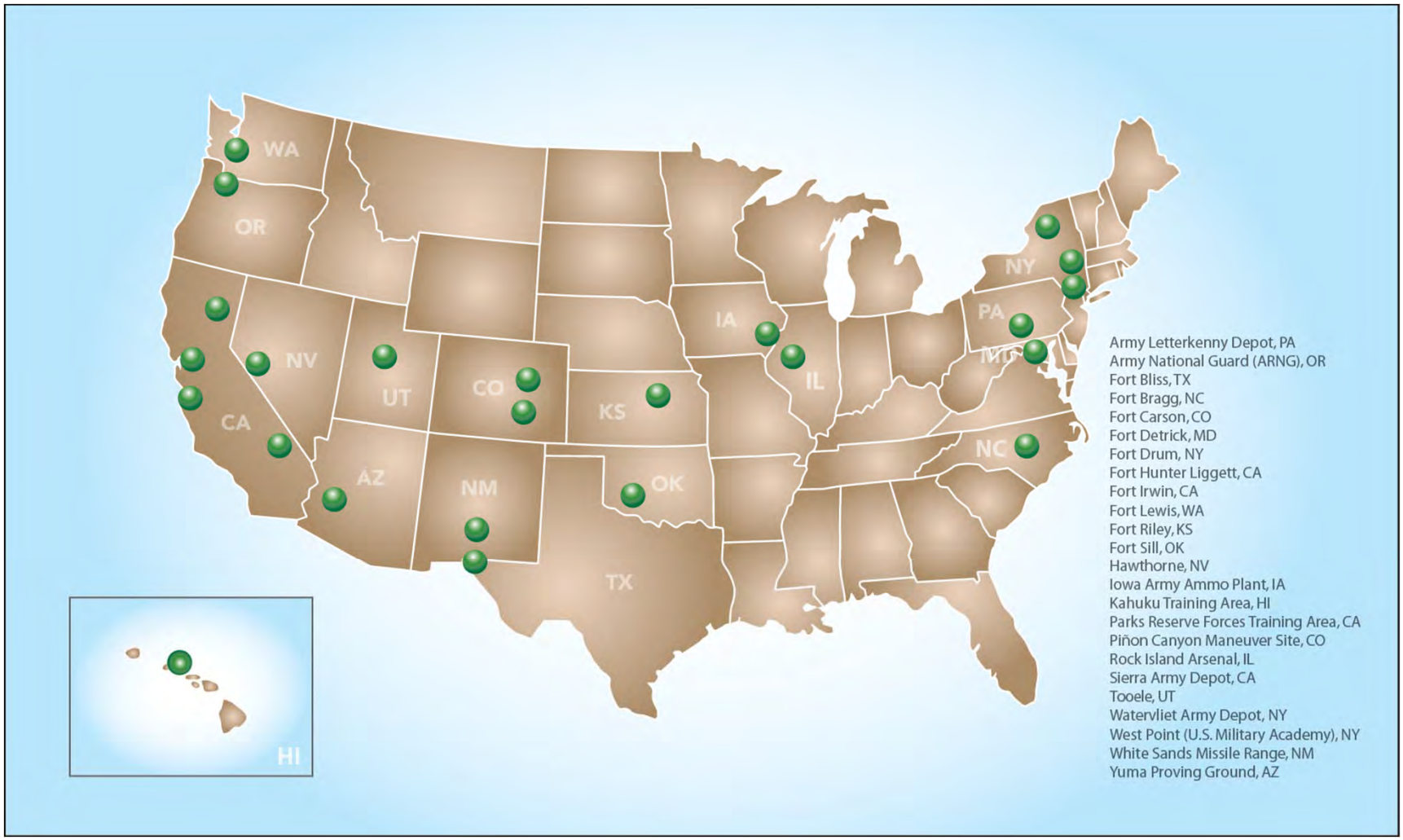
Structured Process for Identifying Opportunities



Stage 1	Stage 2	Stage 3	Stage 4
■ State regulatory, policy, market, and renewable resources ■ Installation land availability, GIS, and master plan review ■ Mission & environmental impacts ■ Financial viability across alternative financing contracts ■ Project development risk factors	■ Stage 1 validation with installation SMEs ■ Site visit/walkthrough: siting determination ■ Preliminary stakeholder meetings (including utility)	■ Project concept vetted ■ Project deconfliction (mission compatibility, NEPA scoping) ■ Stakeholder analysis and mitigation plans	■ Project charter signing ■ Army stakeholder approval ■ Execution Team formulation

Increased due diligence and decreased risk early-on, through incremental analysis and buy-in – resulting in a viable, defined and well-supported project

Current Opportunity Assessments



How to Work with the EITF

Industry

- Register to meet with EITF staff to provide summaries on industry capabilities, visit www.armyeitf.com
- **Industry Days** at installations
- **Army Renewable Energy Conference** Spring of 2012

Installations

- The EITF will actively work with installations to screen and provide feedback on renewable energy project opportunities based on an enterprise-wide approach.

Questions and Answers

Learn More at www.armyeitf.com

ARMY STRONG